

## CLAIMS

What is claimed is:

- 1           1.       A probe pin array, comprising:  
2           a housing having a first surface and a second surface; and  
3           a plurality of probe pins extending between said housing first surface and said  
4           housing said second surface, wherein said plurality of probe pins extend substantially  
5           perpendicularly from said housing second surface and wherein said plurality of probe  
6           pins each further include a leading end having a taper between about 10 and 25 degrees.
- 1           2.       The probe pin array of claim 1, wherein said leading end taper is about 15  
2           degrees.
- 1           3.       The probe pin array of claim 1, wherein said plurality of probe pins each  
2           comprise steel coated with gold.
- 1           4.       The probe pin array of claim 3, wherein said plurality of probe pins each  
2           has a diameter of between about 30% and 60% of a diameter of a pin of a pin grid array  
3           microelectronic device to be inserted into a socket to be tested by said plurality of probe  
4           pins.

1           5.       The probe pin array of claim 1, further including an alignment guide  
2   having a chamfered surface with an angle of between about 45 and 70 degrees from  
3   planar with said housing second surface.

1           6.       The probe pin array of claim 5, wherein said chamfered surface has an  
2   angle of about 60 degrees from planar with said housing second surface.

1           7.       A probe pin array, comprising:  
2           a housing having a first surface and a second surface;  
3           a plurality of probe pins extending between said housing first surface and said  
4   housing said second surface, wherein said plurality of probe pins extend substantially  
5   perpendicularly from said housing second surface; and  
6           at least one alignment guide extending from said housing second surface having at  
7   least one chamfered surface oriented toward said plurality of probe pins.

1           8.       The probe pin array of claim 7, wherein said plurality of probe pins each  
2   further include a leading end having a taper between about 10 and 25 degrees.

1           9.       The probe pin array of claim 8, wherein said leading end taper is about 15  
2   degrees.

1           10.     The probe pin array of claim 7, wherein said plurality of probe pins each  
2     comprise steel coated with gold.

1           11.     The probe pin array of claim 10, wherein said plurality of probe pins each  
2     has a diameter of between about 30% and 60% of a diameter of a pin of a pin grid array  
3     microelectronic device to be inserted into a socket to be tested by said plurality of probe  
4     pins.

1           12.     The probe pin array of claim 7, wherein said alignment guide chamfered  
2     surface has an angle of between about 45 and 70 degrees from planar with said housing  
3     second surface.

1           13.     The probe pin array of claim 12, wherein said chamfered surface has an  
2     angle of about 60 degrees from planar with said housing second surface.

1           14.     A probe pin array, comprising:  
2             a housing having a first surface and a second surface;  
3             a carrier having a first surface and a second surface, wherein said carrier second  
4     surface abuts said housing first surface;  
5             a plurality of probe pins extending between said carrier first surface and said  
6     housing said second surface and extending between said housing first surface and said

7 housing said second surface, wherein said plurality of probe pins extend substantially  
8 perpendicularly from said housing second surface; and  
9 at least one alignment guide extending from said housing second surface having at  
10 least one chamfered surface oriented toward said plurality of probe pins.

1 15. The probe pin array of claim 14, wherein said plurality of probe pins each  
2 further include a leading end having a taper between about 10 and 25 degrees.

1 16. The probe pin array of claim 15, wherein said leading end taper is about  
2 15 degrees.

1 17. The probe pin array of claim 14, wherein said plurality of probe pins each  
2 comprise steel coated with gold.

1 18. The probe pin array of claim 17, wherein said plurality of probe pins each  
2 has a diameter of between about 30% and 60% of a diameter of a pin of a pin grid array  
3 microelectronic device to be inserted into a socket to be tested by said plurality of probe  
4 pins.

1 19. The probe pin array of claim 14, wherein said alignment guide chamfered  
2 surface has an angle of between about 45 and 70 degrees from planar with said housing  
3 second surface.

- 1            20.    The probe pin array of claim 13, wherein said chamfered surface has an
- 2    angle of about 60 degrees from planar with said housing second surface.